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Quality Engineering Test Report

SERIES: DRP-240 240W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A. DRP-240-24 24V/10A B. DRP-240-48 48V/5A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	MAX. INRUSH CURREN	I/P:230VAC SPEC:50A O/P: FULL LOAD	A: 27.22A B: 27.44A	P
2	SET UP TIME	I/P:230VAC SPEC:800mS O/P:FULL LOAD	A: 313mS B: 317.86mS	P
3	RISE TIME	I/P:230VAC SPEC:40mS O/P:FULL LOAD	A: 18.69mS B: 18.32mS	P
4	HOLD UP TIME	I/P:230VAC SPEC:20mS O/P:FULL LOAD	A: 29.02mS B: 26.99mS	P
5	LINE REGULATION	I/P:110~264VAC SPEC: A: ±0.5 % O/P:FULL LOAD B: ±0.5 %	A. +0.02 % ~ +0.02 % B. +0.012 % ~ +0.024 %	P
6	LOAD REGULATION	I/P:230VAC SPEC: A: ± 1 % O/P:MIN. TO FULL LOAD B: ± 1 %	A. -0.103. % ~ +0.103 % B. -0.012 % ~ +0.00 %	P
7	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC SPEC: A: ±1 % O/P:0% TO FULL LOAD B: ±1 %	A. -0.259 % ~ +0.00 % B. +0.00 % ~ +0.012 %	P
8	OVER LOAD PROTECTION	I/P:230VAC SPEC: A: 105 % ~ 150 % O/P:TESTING B: 105 % ~ 150 %	A: 137% B: 132%	P
9	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:85~264VAC O/P:FULL LOAD	A. 70.0V ~ 264 VAC B. 53.4V ~ 264 VAC	P
10	RIPPLE&NOISE	I/P:230VAC SPEC: A: 80 mVp-p O/P:FULL LOAD B: 150 mVp-p	A: 19 mVp-p B: 24 mVp-p	P
11	AC INPUT CURRENT	I/P:230VAC SPEC:1.8A O/P:FULL LOAD	A: 1.272 A B: 1.247 A	P
12	EFFICIENCY	I/P:230VAC SPEC: A: 84 % O/P:FULL LOAD B: 85 %	A: 85.73% B: 86.74%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC SPEC: A: 30~36V O/P:MIN LOAD B: 54~60V	A: 34.1V B: 56V	P
14	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: A: 24 V ~ 28 V O/P:MIN. LOAD B: 48 V ~ 53 V	A. 20.86 V ~ 29.46 V B. 39.06 V ~ 55.0 V	P
15	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG-<3.5mA N-FG-<3.5mA	A: L-FG: 1.05mA, N-FG: 1.00mA B: L-FG: 1.05mA, N-FG: 1.00mA	P
16	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3KVAC/ 1 min. I/P - FG: 1.5KVAC/ 1 min. O/P -FG: 0.5KVAC/ 1 min.	A: I/P-O/P: 7.15mA, I/P-FG: 5.43mA, O/P-FG: 15.14mA B: I/P-O/P: 7.35mA, I/P-FG: 5.59mA, O/P-FG: 15.22mA	P
17	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100MOhms MIN. I/P-FG: 500VDC/100MOhms MIN. O/P-FG: 500VDC/100MOhms MIN.	A: TEST OK B: TEST OK	P

NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>18</td><td>BURN-IN TEST</td><td>I/P: 230VAC O/P: FULL LOAD
TA:26.1°C BURN-IN DURATION : 1.5 hrs</td><td>A:NON BREAK</td><td>P</td></tr>
<tr><td rowspan="3">19</td><td rowspan="3">ENVIRONMENT TEST</td><td>1.LOW TEMPERATURE TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:-13.8°C</td><td>AFTER 14.5hrs
POWER ON OK</td><td rowspan="3">P</td></tr>
<tr><td>2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:52.2°C</td><td>AFTER 6.5 hrs
NON BREAK</td></tr>
<tr><td>3.High Humidity High Voltage On/Off Test
I/P:267VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:26.7°C
AMBIENT HUMIDITY:95%</td><td>AFTER 14hrs POWER ON
NON BREAK</td></tr>
<tr><td>20</td><td>TEMPERATURE RISE TEST
Trise OF PARTS</td><td colspan="2">A: I/P :230VAC AFTER 2.5 hr BURN-IN
O/P :FULL LOAD TA:25.2°C
<table>
<tr><th></th><th>POSITION</th><th>P/N</th><th>TEMP</th><th>Trise</th></tr>
<tr><td></td><td>BD1</td><td>BRIDGE DIODE</td><td>59.2°C</td><td>34.0°C</td></tr>
<tr><td></td><td>Q2</td><td>MAIN TRANSISTOR</td><td>70.1°C</td><td>44.9°C</td></tr>
<tr><td></td><td>T1</td><td>MAIN TRANSFORMER WIRE</td><td>79.2°C</td><td>54.0°C</td></tr>
<tr><td></td><td>C52</td><td>O/P FILTER CAPACITOR</td><td>48.5°C</td><td>23.3°C</td></tr>
<tr><td></td><td>L2</td><td>O/P CHOCK</td><td>68.8C</td><td>43.6°C</td></tr>
<tr><td></td><td>C5</td><td>I/P FILTER CAPACITOR</td><td>74.7°C</td><td>49.5°C</td></tr>
<tr><td></td><td>LF3</td><td>I/P FILTER TRANSFORMER</td><td>63.3°C</td><td>38.1°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>21</td><td>CRITICAL COMPONENT RECORD
(FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">A: FUSE :5A/250V
BRIDGE DIODE :KBJ608G 6A/800V
LINE FILTER :35066H ET-28
TRANSFOMER TF-805
POWER SWITCHER :2SK1358 9A/900V
OUTPUT CAPACITOR :N.C.C 1500u/35V KY 105°C
INPUT CAPACITOR :220u/450VMXR 105°C
P.C.B :DRP-240A</td></tr>
<tr><td>22</td><td>LIFE CYCLE</td><td colspan="2">A: SUPPOSE C52 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:25°C Tc52:48.3℃ Life: 373577.6hrs
I/P:230VAC O/P:FULL LOAD Ta:55°C Tc52:76.5℃ Life: 52907hrs</td><td>P</td></tr>
<tr><th>DATE</th><th>SAMPLE</th><th>TEST RESULT</th><th>TEST</th><th>APPROVAL</th></tr>
<tr><td>20020116</td><td>RD SAMPLE
24V,48V</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
<tr><td>20020423</td><td>PRODUCT
SAMPLE
A202B03
24V,48V</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
<tr><td>20020605</td><td>PRODUCT
SAMPLE
A205B22
24V</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
<tr><td>20021206</td><td>PRODUCT
SAMPLE
A2010B27
24V</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
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